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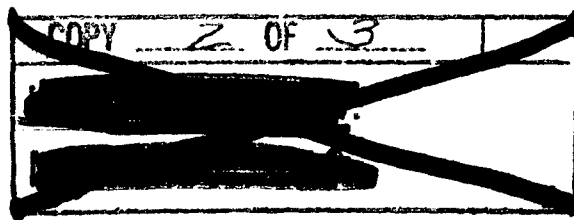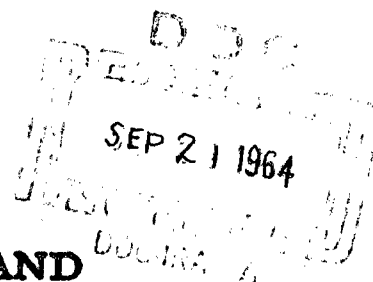RM-4202-PR
AUGUST 1964

SIMULATION OF DECISIONMAKING IN CRISES: THREE MANUAL GAMING EXPERIMENTS

H. Averch and M. M. Lavin

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PREFACE

Using three different manual (or hand-played) gaming experiments, some recent research at The RAND Corporation explored problems of national decisionmaking in politico-military crises. The experiments involved gaming of three geographically separate, very intense crises in the European theater in the 1966-1969 period. Players -- that is, decisionmakers -- had among their options those of escalating a politico-military confrontation to limited war between the United States and the Soviet Union in Europe (using conventional or tactical nuclear weapons) or even to general war if that seemed warranted by national objectives.

This Project RAND Memorandum concentrates on method, on the use of gaming as a tool for studying decisionmaking in a crisis, and for generating research about military forces required in crises. Later reports will describe the substantive findings of the games described here. Understanding of the substantive results of RAND's crisis exercises will be enriched by this discussion of method.

This analysis of crisis gaming techniques should be of use to those in the Air Force who are concerned with crisis management and with the force structure implications of crisis confrontations. In addition the analysis may be of interest to the Department of Defense, the Arms Control and Disarmament Agency, and the State Department. Since national decisionmakers have recently emphasized planning for politico-military confrontations, the analysis here should help by pointing out some of the potentials of crisis gaming.

SUMMARY

Defense policy-makers have recently emphasized in public statements that contingency planning for crises has become part of U.S. basic national security policy. Various study techniques can be used to analyze crises, among them historical review, scenario construction, and gaming. We believe that manual gaming techniques are particularly useful for studying decisionmaking processes that occur during crises; that is to say, for decisionmaking that involves intricate political and military constraints.

This Memorandum describes how gaming techniques have been used in examining three hypothetical European crises occurring in the late 1960s. Our aims in this gaming have been to identify some of the political and military constraints that affect national decisionmaking during crises; to discern whether or not common patterns of action appear in different crises; and to infer military requirements in crises. On the basis of our recent gaming experience, we advance our observations and judgments about:

o   The effects of our three game structures on decision-
    making. The quality and quantity of decisions in these
    games compared with decisions in real crises.

o   The escalation of violence in the games as opposed to
    that in real crises.

o   The impact of internal and external information flows
    on our game decisions.

o   Typical questions identified by these plays as deserving
    further study.

We found that differences in game structure affect the conduct of hypothetical crises in important ways. For example, these differences sometimes govern the impact of threats and diplomatic moves, dictate the pace of escalation, and interfere with perceptions of an adversary's objectives. Regulating the information flows within a crisis game is exacting and vital. Circumscribing the role of the CONTROL team is troublesome. Notwithstanding these and other difficulties, our experience suggests that manual gaming, though not a means of predicting crises, can identify many factors likely to enter future crisis

decisionmaking. Also it can assist military planners in anticipating the needs of crisis decisionmakers. We judge that the cost of such gaming is moderate relative to alternative research techniques and to the importance of its objectives. The gaming procedures that we describe are but three of a broad range of possibilities. An attractive feature of this type of gaming is its adaptability to a variety of research needs.

ACKNOWLEDGMENTS

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I. INTRODUCTION

Military conflict between nations generally has been preceded by
political crisis, yet most political crises have not resulted in warfare.
Historians and political scientists have often striven to understand the
factors that distinguish crises culminating in violence from those that
subside. Recently the problem of <u>national decisionmaking in a crisis</u>,
or more briefly, <u>crisis management</u>, under political, economic, and mili-
tary constraints has received attention inside the U.S. government and
without.[*]

Because crisis management involves the interaction of political and
military options, students of U.S. national security policy, including
military operations researchers and systems analysts, can look to past
and potential crises for insights into many defense problems. It is
clear that both the Defense and State Departments now look at military
force requirements in terms of possible politico-military confrontations
with the Soviet Union and other powers. Secretary McNamara recently
stated:

> "We are relying more and more on sophisticated analysis of
> potential political-military conflicts and an appraisal of

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[*]The descriptive political, historical, and diplomatic literature
on crises is enormous. Analytic studies and studies of <u>how</u> to make
decisions in a crisis were rare until recently. Theodore Sorensen,
<u>Decision-Making in the White House</u>, Columbia University Press, New York,
1964, contains an analysis of the Cuban missile crisis as viewed from
inside the Kennedy administration. Richard Neustadt's <u>Presidential
Power</u>, Science Editions, New York, 1962, contains many prescriptions
for making decisions in a crisis. H. Goldhamer and H. Speier, "Some
Observations on Political Gaming," <u>World Politics</u>, Vol. VI, No. 3,
pp. 197-221, October 1959, provides an historical survey of attempts to
study political crises by gaming techniques. <u>The Journal of Conflict
Resolution</u>, Vol. XII, No. 1, September 1962, pp. 71-83, contains a num-
ber of articles dealing with the sociological and psychological aspects
of decisionmaking in a crisis. Snyder, Bruck, and Sapin in <u>Foreign
Policy Decision-Making</u>, The Free Press of Glencoe, New York, 1962,
attempt to provide a general conceptual framework for studying decision-
making. And Harold Guetezkow, <u>Simulation in International Relations:
Development for Research and Teaching</u>, Prentice Hall, Englewood Cliffs,
N. J., 1962, discusses simulation techniques in studying foreign policy.

the advantage to the United States of alternative force
sizes in relation to these contingencies and the various
applications of those forces in those contingencies."*

Contingency planning for these politico-military confrontations has
now become part of United States basic national security policy.
Walt Rostow states:

> "Our basic national security policy now accepts the central
> reality of this type of controlled, limited, politico-
> military confrontation. These episodes are not regarded as
> exceptions to the rule to be dealt with ad hoc but as the
> form the struggle is most likely to take."**

Orienting basic national security policy around these concepts
has many implications for all U.S. military programs. In particular,
planning for potential politico-military confrontations (crises) in
Europe or on the European periphery raises many specific questions
about the U.S. military presence in NATO and Europe. These include
the following:

o Force composition:

U.S. policy on country-by-country allocation of NATO
resources: who produces what, who contributes what
forces, and so on.

U.S. position on a preferred NATO force mix at a
stipulated budget.

o U.S. defense budget allocation for her NATO forces, in-
cluding military aid programs.

o Doctrine of deployment -- including basing and logistical
networks.

o Contingency commitment plans, including before-the-fact
declaratory policy -- both for conventional and/or nuclear
weapons.

o Command, control, and communications structure.

o Arms control agreements.

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*
Department of Defense Appropriations for 1965, Subcommittee on
Department of Defense Appropriation, Committee on Appropriations, House
of Representatives, February 17, 1964, p. 304.
**
W. W. Rostow, "The Test: Are We the Tougher," New York Times
Magazine, June 7, 1964, pp. 21, 111-113.

o Politico-military doctrine, <u>vis à vis</u> both U.S. allies
   and adversaries.

o Policy concerning non-European activities and incentives
   of NATO allies.

o Aims for NATO's future charter, both formal and <u>de facto</u>.

Given the need for studying crises, many techniques can be used.
Historical studies of crises provide explanations and criticism, using
documents and other sources as are available from <u>the parties to a
crisis or a limited war</u>. But the historian, in judging politico-
military decisions, cannot properly tell us what a decisionmaker <u>ought</u>
to have done given constraints of time, permissibility, information,
and past commitments.[*]

Scenarios are another technique that can be employed in the study
of crises. In the analysis of politico-military confrontations, the
role of scenarios is no longer restricted to that of educational device
or guide to the imagination. Rather, scenarios -- defined here to be
hypothetical series of events involving politico-military interactions --
are used to illustrate theorems about the use or threat of military
force and/or diplomacy in a concrete way. Unfortunately, scenarios
suffer from many of the defects of historical analysis. The scenario
writer constructs the behavior of adversaries in a crisis without many
of the constraints that operate on decisionmakers in a crisis. Further-
more, the scenario writer cannot experience surprise or simulate
Presidential commitment. Yet it is known that these factors are very
important in decisionmaking and the use of military force. In other
words, both the scenario writer and the historian attack crisis studies
from the outside, looking in.^{**}

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[*]Sidney B. Fay's classic discussion, <u>The Origins of the World War</u>,
The Macmillan Company, New York, 1930, 2 Vols., is an example of the
historical overview technique of crisis study. A recent example is
H. Finer, <u>Dulles Over Suez</u>, Quadrangle Books, Chicago, 1964. Finer
continually judges Dulles' action in terms of the historical outcome
of the Suez crisis, not in terms of the <u>quality</u> of Dulles' decisions
given the operative constraints.

^{**}Arthur Schlesinger, Jr. writes: "I think the historian tends in
retrospect to make the processes of decision far more tidy and rational

The capabilities of the military forces at hand are vital in the conduct of crises. To help him decide what he ought to do, a President needs evaluations of alternative military actions.[*] But the essence of his conduct within a crisis derives from the political and military constraints that limit his military freedom of action -- what the President and his principal advisers choose to do in a crisis can be quite different from the ultimate actions their military means permit. These differences are the substance of any study of crisis management. Further, crises analysis can give a broadened appreciation of military requirements, for if we observe that national decisionmakers find their options in potential crises limited by lack of appropriate military forces, then we can set down some guidelines for changing the force structure.

A politico-military confrontation can be viewed as a sequential competitive and/or cooperative process. We believe that manual gaming techniques are useful for studying such processes, particularly when (as is the case for crisis situations) the problem is so complex and so much information is required that an interdisciplinary study team is at an advantage.[**] Generally, a manual game can focus the attention and knowledge of a group of analysts; specifically, a politico-military game without prescribed moves (that is, with open play) aids study of decisionmaking with intricate constraints. But such gaming possesses biases and inadequacies, and these will be an important concern of our paper.

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than they are: to assume that people have fixed positions and represent fixed interests and to impose a pattern on what is actually a swirl if not a chaos. I think the historian doesn't realize the opaqueness of the process." "Schlesinger at the White House: An Historian's Inside View of Kennedy at Work," Harper's, Vol. 229, July 1964, p. 56.

[*]The USSR certainly made some calculation about what the United States could do before they placed missiles in Cuba. The Soviet calculation about what the United States would do was mistaken. The U.S. problem in the crisis was to change the Soviet estimate of its will and intent under imposed constraints with respect to time, allies, and potential escalation. (See Sorensen, op. cit., p. 31.)

[**]An excellent review of military gaming and its terminology is to be found in E. W. Paxson, War Gaming, The RAND Corporation, RM-3489-PR, February 1963.

In sum, the primary aim of this paper is to discuss manual gaming as a tool in the study of crisis management -- the range of crisis management being defined broadly to include high-level military conflict as well as low-level political conflict. Our discussion includes:

o The structure and rationale of the three manual gaming procedures used in the RAND research.

o The effects of game structure on decisions; the quality and quantity of game decisions as opposed to decisions in real crises; escalation in games opposed to escalation in the real world.

o The impact of internal and external information flows on decisions reached.

o Questions typically identified by these game plays as deserving intensive research.

II. GAME STRUCTURE

In this section we describe three schemes for open-play, manual, politico-military games. Their use in a recent RAND Corporation study provided a simplified competitive process of decisionmaking in hypothetical European crises in the later 1960s.[*] (The decisionmaking in the games corresponded to that of the highest political and military authorities of the countries involved.) These games do not serve predictive purposes. Their usefulness is rather for identifying research needs in a systematic and revealing way and generating hypotheses to be tested by other forms of analysis.

Many biases and limitations are inherent in open-play, manual, politico-military games. Obviously, no game can reproduce the emotional environment in which actual crisis decisionmaking is imbedded. Nor do the players normally possess backgrounds of information and experience similar to responsible government officials, particularly of other countries. The decisionmaking agencies in the game are immeasurably less structured, both formally and informally, than those of governments.[**] Decisions, once made in games, are hardly subjected to the resistance, undercutting, diversion, obfuscation, and so on that sometimes meets even Presidential rulings. And no amount of imagination in game design and play can compensate for the role of surprise in real life. For these and many other such reasons we believe crisis games not only have poor predictive qualities, but also are doubtful sources, of themselves, of conclusions on crisis phenomena. But similar limitations apply to any research technique for studying crisis management. By comparing actions in crisis games with action in real crises and by analyzing the impact of game structure on decisions, it is possible to generate useful theories that can be tested.

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[*]William Jones of The RAND Corporation designed the procedures of these three games. Manual gaming at RAND has substantially benefited from the work of Olaf Helmer.

[**]However, characteristically, decisionmaking in crises involving the United States devolves on ad hoc unstructured groups including both military and political actors.

The cost of playing a game is an important constraint to its application. Our objective was to devise some crisis gaming schemes that would be compact in time and sparing of total man-hours, but permit the participation of a number of knowledgeable and interested people whose availability was limited. All three of our games put the burden of the detailed preparations (a richly detailed pre-crisis scenario, a compendium of reference data on military resources, the working and display maps, and so on) and of the demanding control function on a small cadre of three or four people substantially occupied for two to four weeks. The other participants -- from five to a dozen, depending on the game structure -- performed as players during a number of fractional-day sessions within a period of two days to two weeks, again depending on the game structure.

The three games are identified by the general European locale of the crisis: The first is known as the North Flank Exercise; the second as the Central Front Exercise; and the third as the South Flank Exercise. Game structure evolved as shortcomings were corrected.[*]

The first of these game designs was an experiment in combining gaming with open discussions. The shaded areas in Fig. 1 depict the period of activity. The complete span of this exercise was approximately one month and involved 17 participants. A detailed scenario presenting a hypothetical set of world, NATO, and Northern Europe conditions in 1966 was prepared by a political scientist with some assistance from a regional specialist. Reference documents and display maps presenting information on NATO and Soviet military resources were prepared prior to the play; in addition, two retired military officers were in attendance as consultants during the play. The play itself was confined to the afternoons of two successive days, and used five-man teams of mixed background and interests. (The compressed playing period made possible the participation of some people whose competence we wished to use, but who would not have been available for a more

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[*]The scenario for the Central Front Exercise was developed by H. Averch and S. Brown, aided by A. Horelick. The scenarios for the North and South Flank Exercises were constructed by H. A. DeWeerd.

(55 man-days; 17 participants)

PERSONNEL	PREPARATION		PLAY				Critique	ANALYSIS & REPORTS

Fig. 1—Activity schedule of the North Flank Exercise

Note: The lighter shaded areas correspond to periods when the individual teams were isolated; the darker shaded areas to periods when BLUE, RED, and CONTROL teams met jointly.

sustained exercise.) The BLUE team represented the United States and Norway; the RED team represented the Soviet Union; the CONTROL team represented all other countries, including other NATO allies and Soviet satellites.

The play of the North Flank Exercise consisted of periods during which the BLUE, RED, and CONTROL teams each would caucus in an isolated meeting room, alternating with periods during which all participants would be present in the same room in a seminar arrangement. The CONTROL team, which had made preparations the morning of the first day, conducted a review of the scenario and defined an initial phase of the crisis for the assembled RED and BLUE teams. The latter then retired to caucus rooms and tried, within roughly an hour, to achieve a team position and rationale on contingency plans for further crisis actions and on their rationalization. (Each team had a nominal captain to serve as the principal spokesman during the seminar periods, but otherwise was unstructured.) The immediately following period was a seminar discussion, chaired by the Game Director, in which the two playing teams openly revealed their set of contingency plans. The CONTROL team then ruled as to the action that would have occurred and the playing teams again retired to prepare another set of contingency plans based on these developments. The two new sets of contingency plans were, in turn, exposed in a following seminar period, and were evaluated by CONTROL to advance the crisis action, with knowledge of the political and military doctrines evolved by the playing teams the previous afternoon. The morning of the second playing day afforded the CONTROL team an opportunity to design various crisis developments that impelled the players to sharpen and expand their policies during the second afternoon of play.

The game structure of the North Flank Exercise afforded an orderly framework for the collaboration of varied professionals; it required explicit statements of political and military assumptions to accompany suggestions for crisis behavior. But we conclude that for our purposes three serious defects were present in the mechanics of play:

   o The briefness of the caucus periods and the absence of
      an authority structure among the five team members made

it impossible to unify the disparate viewpoints within
the team into a single set of contingency plans. Al-
though team leaders had been named, there was not enough
time for participants to talk out their positions; the
leaders were reluctant to force a team position.

o Examination of the crisis preparations and actions by
each side in full view of the other during seminar peri-
ods unrealistically affected the next (secret) state of
contingency planning.

o Political negotiations and crisis diplomacy could not be
adequately represented.

However, what seemed most serious was the thrust of the game toward
the evaluation of military force performance, but with the latter being
shorn of its feedback on crisis decisionmaking. In retrospect, this
shortcoming was unavoidable, for the gaming procedure included no
recognizable representation of crisis decisionmaking appropriately
enveloped by political and military constraints.

The Central Front Exercise was conducted with substantial changes
in gaming structure from the North Flank Exercise (see Fig. 2):

o The playing period spanned a full week, with the two
playing teams simultaneously in session on five suc-
cessive mornings.

o The BLUE and RED team captains were given the respon-
sibility for obtaining unified decisions from their
respective teams. Generally, an ad hoc voting pro-
cedure was used.

o A representative of the CONTROL team was present con-
tinuously at the meetings of the playing teams. His
function was to record the lines of argument supporting
the crisis decisions and particularly to note minority
views that did not prevail. Also, he was an on-the-spot
representative of the NATO allies to the BLUE team,
which decided U.S.-only actions; or of Soviet allies to
the RED team, which decided USSR-only actions.

Each day of the game, the playing teams received a description of the
crisis situation, spent the first period discussing the situation, and
then prepared their projected plans. These plans, in the form of a
communication to CONTROL, projected into the game future as far as had
been stipulated by the CONTROL team. In addition, a playing team
could elect to pass negotiatory messages to its adversary, subject to

(74 man-days; 11 participants)

PERSONNEL	PREPARATION	PLAY										CRI-TIQUE	ANALYSIS & REPORTS
CONTROL 1 2 3	SCENARIO / MAPS & DATA												
BLUE 1 2 3 Control Rep. 4													
RED 1 2 3 Control Rep. 4													
		A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.	A.M.	P.M.		
		Day #1		Day #2		Day #3		Day #4		Day #5			
	1st week / 2nd week	3rd week											4th week

Fig. 2—Activity schedule of the Central Front Exercise

Note: The lighter shaded areas correspond to periods when the individual teams were isolated; the darker shaded areas to periods when BLUE, RED, and CONTROL teams met jointly.

screening and possible denial by the CONTROL team. More generally, the planned or contingent moves by a playing team could be military, diplomatic, economic, psychological, covert, overt, or even covert moves designed to be deliberately "leaked." Public announcements, diplomatic notes, "hot-line" teletype messages were allowed, provided that the playing team adequately informed the CONTROL team of the playing team's intentions and objectives.

Our findings include the following:

o This gaming procedure does not provide enough opportunity for research and outside consultation in the course of play.

o Further, the gaming structure exaggerates the focusing in time, nature, and locale of the crisis actions.*
Partly this comes from the pressure of time on the players. And undeniably a small team of decisionmakers lacks professional knowledge in many areas of international action and has little incentive to make unfamiliar moves. No doubt the diffuse and delayed effects of some types of international action cause players to feel such moves would be inconsequential to the crisis gaming.

o Given a description of the then-current crisis situation, the two playing teams would simultaneously project contingency plans into a CONTROL-stipulated future period. The CONTROL team would trace the contingent actions for both sides and then prescribe a time and situation for the next cycle of crisis decisionmaking. A serious difficulty is simply this: playing teams believed it was unrealistic to bind them to their prepared contingency plans if more than a small advance of the crisis calendar were made, that is, during a crisis contingency plans would be more or less continuously modified as information continuously accumulated or else different plans would be selected.

o Some impairment of play probably occurs because of CONTROL's omniscience in being the game director and playing the role of all national entities other than the principals as well. CONTROL tends to block some sources of information that the crisis principals would have in the

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* However, no one can argue that during the Cuban missile crisis the attention of the President was not focused in time and space. Fortunately, there are officials in the government whose job it is to focus on other crisis areas. Thus the government could cope with the Chinese-Indian crisis simultaneously with the Cuban crisis.

real world; thus some persisting misperceptions that
each side has of the other in the gaming exercise seem
too artificial.

The design of the South Flank Exercise procedures relieved sev-
eral structural deficiencies of its predecessors (see Fig. 3). As one
change, the play itself was conducted over a two-week period, with the
BLUE and RED teams meeting on alternate mornings. This "ping-pong"
arrangement eases the compression of time on decisionmaking by providing
more opportunity for research and for consultation. It also permits a
more explicit responsiveness of one team's contingency plans to the
other's, notwithstanding the fact that the game calendar is still moved
in discrete jumps by CONTROL. As another change, the BLUE team was
split into separate POLITICAL and MILITARY sections, with the POLITICAL
section being the superior in authority. Each BLUE section of two play-
ers was further structured into two roles: a President and a Secretary
of State comprising the POLITICAL section; a Secretary of Defense and
a Chief of Staff, the MILITARY. Communication between the POLITICAL
and MILITARY sections was limited to formal conferences between one
member of each section (with a member of CONTROL present both as a
monitor and recording secretary) or to written correspondence that was
screened by CONTROL. The MILITARY section suggested possible military
moves and/or was directed to plan specific ones initiated by the POLIT-
ICAL section; the latter incorporated such of these as it wished in the
day's complete politico-military contingency plan.

Our experience with the procedures of the South Flank Exercise was
most satisfying, but it suggested two needs for changes to improve
future crises games. One, a better means of structuring communication
between the POLITICAL and MILITARY sections of a team ought to be de-
signed; for, in the South Flank Exercise, the BLUE MILITARY section
found its perceptions of its RED adversary to be too filtered by the
intervening CONTROL and BLUE POLITICAL layers of the game structure;
on the other hand, BLUE POLITICAL found it could not quickly acquire
relevant military information needed in its deliberations. Two, the
RED team ought also to be structured; for the lack of RED internal roles
detracted from the team's decision processes (as compared with the
structured BLUE team's operations).

Fig. 3—Activity schedule of the South Flank Exercise

Note: The lighter areas correspond to periods when the individual teams were isolated; the darker shaded areas to periods when BLUE, RED, and CONTROL teams met jointly.

III. GAME STRUCTURE AND DECISIONS

Gauging the substantive ability of crisis gaming in identifying questions and generating hypotheses requires that the impact of the game structure on the quality and quantity of decisions be assessed. Behavior that is simply dictated by game structure must be distinguished from behavior that has real world analogues. That the game structure often prevents complete simulation of the real world and has a constricting effect on decisionmaking is not necessarily an imperfection. Time compression, narrow focus, inability or refusal to examine alternatives are often as characteristic of real crises as simulated ones. To be meaningful, a critique ought to address the specific team behavior in each game. Fortunately, the game structure seemed to operate in a similar manner in all three games; similar moves and doctrine appeared on both sides in all three. Consequently, it is possible to generalize about behavior in the three.

EFFECT OF LOCALE

All three games took place in European areas where the United States is at a distinct military disadvantage. Yet at the same time these areas involved direct and vital interests of the United States, plus a public U.S. commitment to defend them. These two factors had great impact on BLUE's strategy and its willingness to negotiate. In and of themselves, the limited changes of territory or the legal issues over Berlin did not seem of critical importance. What was most important to BLUE in all three games was (1) providing public and private evidence of the American evaluation of its own power position and its willingness to maintain its general rights and obligations, and (2) maintaining the status quo in Europe or returning to the status quo ante. Item (1) above caused the issues in the crises games to assume far greater significance than was justified intrinsically, for BLUE actions on these issues advertised both its assessment of the balance of power and its will and intent. If BLUE did not act to prevent forceful territorial changes in Europe or changes in the legal status of Berlin,

then the political balance of power would shift even though the military balance would remain largely unaffected.

The second consideration relates to the first. There has been no forceful territorial change in Europe since World War II and the last Soviet advance was the subversion and seizure of Czechoslovakia in 1948, so territorial changes are highly significant. Not only did the BLUE teams have to demonstrate their intent to return to the status quo ante, but they also needed to show that the method of return was critical. Had RED offered to return completely to the status quo ante to entice BLUE to the negotiation table, this would have been unacceptable to BLUE in a European environment. For BLUE to return to the status quo ante by RED permission would be to publicize its weakness. Actually BLUE never felt that it received anything from RED except offers to negotiate about restoration of the status quo ante after a cease fire. BLUE believed such cease fire would allow RED to consolidate its positions if negotiations failed or were not sincere. Characteristically, BLUE was willing to bargain with RED provided the status quo ante was restored before negotiations began. And when this condition could not be met, BLUE showed a willingness to escalate the conflict.

The RED teams in the crisis games also seemed to realize that the issues were not local, even though local conflict existed. RED repeatedly applied these minor military confrontations as a lever to change the over-all balance of power and, specifically, to promote the disintegration of the NATO alliance. Characteristically, RED diplomatic messages flowed to major BLUE allies to emphasize the far-flung dangers of the local confrontation, and the risks to the allies of escalation. RED asked the allies to urge BLUE decisionmakers to retreat or at least to modify U.S. commitments. The function to RED of local force was to expose how shallow U.S. commitments were and to communicate RED's evaluation of its power position. Having once committed itself to a local European confrontation with BLUE, RED felt it had to demonstrate some willingness to climb the escalation ladder with BLUE and to sustain its refusal to restore the status quo ante. However, RED seemed willing to dampen the crisis or withdraw from the local confrontation

with BLUE when it became evident that BLUE would accept very high costs
to restore the status quo ante. But in the exercises BLUE often found
it difficult to convey such an attitude and make it credible -- in part
because strategic parity existed, in part because of communication
restrictions. On the other hand, RED often appeared to be willing to
continue the confrontation even when substantial risks existed for RED
(see the discussion below on tit-for-tat strategies).

The doctrines of both teams in each crisis seem to be consistent
with the policies characterizing real-world relations in Europe.
Where the Soviet Union has sensed an opportunity to undermine American
commitments, especially in Berlin, it has so opted. Each time there
is a Soviet challenge in Europe, the United States has had to maintain
or reestablish the existing power balance and the United States has
often threatened to act violently to do so, especially in a Berlin
crisis. So, such BLUE game behavior does have real-world analogues.
There is no historical example of a crisis where the Soviet Union per-
sisted as much as RED did in the exercises but such behavior in future
crises cannot be ruled out.

The question remains whether the escalation exhibited in the
games was not faster and higher than would ensue in the real world.[*]
For this question, locale is significant. The prestige and the vital
interests of both the United States and the USSR are so explicit in
the European theater that crises can more readily elevate there than
in other crisis areas (Africa, Asia) where the interests of nations
are more ambiguous and provide more room for non-escalating crisis
maneuvers.[**] Thus it is moot whether the height of escalation in a
real-world European crisis would necessarily be less than exhibited
in our crisis games. (Miscalculations about the values the other side

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[*] This is also discussed later in terms of information flow and
ad hoc rules of behavior used in crises.
[**] Where the United States can convince the Soviet Union that
the United States stake or interest in a crisis is explicit and is
greater than that of the Soviet Union, there may lie a dampening
effect on a crisis. But in the crisis exercises RED consistently
refused to recognize an inequality of interest.

holds might compound the escalation process.) Of course, the rate of escalation might be much slower in the real world. The rate depends on the number of options, particularly diplomatic or negotiatory options, available at each level of violence. And the game structure limited these options.

COMMUNICATIONS WITH ALLIES, ADVERSARIES, AND INTERMEDIARIES

Diplomatic and military moves with respect to allies, adversaries, and intermediaries were limited in several ways. First, channels of communications between RED and BLUE were restricted to formal notes or "hot-line" communications passed through and screened by CONTROL. There could be no private interaction between ambassadors, no private exchange of communications, no use of informal agents whose conversations could be disavowed if necessary or desirable. In real crises nations are always in contact, publicly, privately, or covertly; information about intent and attitudes, as well as capabilities, flows continuously.

Second, all communications from RED and BLUE to allies and to potential intermediaries (such as the Secretary General of the UN) were delivered to CONTROL. But CONTROL represented NATO, the UN, the Warsaw Treaty Organization, together with secondary nations involved in the three crises. Thus CONTROL was in the position of making decisions for, say, Norway, East Germany, or Bulgaria, with complete information from both sides.

It became clear during the course of our crisis games that the actions of secondary nations represented by CONTROL would help to determine the path of each crisis. Yet the decisions of these secondary nations could not be simulated satisfactorily, because they were represented by CONTROL. There were only two reasonable alternatives for CONTROL: key secondary nations were described as either silent or wavering. But to RED and BLUE, knowing that key secondary nations are silent or wavering is important and powerfully affects their behavior. This was most evident in the South Flank Exercise where BLUE learned that a key secondary nation gave no reply to a diplomatic note,

while RED learned the same country was wavering in its loyalties. BLUE immediately made inferences about this secondary nation which induced actions that otherwise might not have been taken. RED, on learning that this country was wavering, indicated to CONTROL its willingness to yield to BLUE's negotiatory terms. CONTROL then chose to manipulate the key secondary nation so that the crisis exercise could continue. The inferences of both RED and BLUE were wrong, but only because of CONTROL moves after the fact.

For game purposes, given limited resources, CONTROL's manipulation of key secondary nations is legitimate. But there is a cost in realism. The real world exhibits an increasing multipolarity. Small nations have an increasing freedom of action. And crisis management often consists of working for or against the interests of nations beyond the adversary. In our games, it was impossible to work on or against the interests of secondary nations, because CONTROL had complete information and used secondary nations to manipulate the confrontation between BLUE and RED.

Public opinion in the crisis games has the same function. Although domestic and world opinion is often very important in real crises, it is impossible to simulate adequately. CONTROL's best tactic is reporting that opinion is divided or that countries are adopting a "wait and see" attitude. Such attitudes would be important in determining real-world crisis behavior. The effects are suppressed in our games.

The restrictions on information flow and the inability to simulate multipolar worlds necessitate moves designed specifically to signal intent and capability. However, the stronger the signal one side sends in terms of firmly worded notes and resolute military moves, the more the other side infers the first's willingness to escalate. And such perceptions persisted in our games because time and means to explore each other's intent were limited.

Many historical crises show that governments have been far apart in the evaluations of intent at the beginning.[*] But because nations

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[*]President Kennedy said after the Cuban crisis: "I think looking back on Cuba, what is of concern is the fact that both governments were

have many channels of communication, they can modify their evaluations and explore many more options at low levels of violence. Or they can attempt to dampen the crisis by marking time. The cost of waiting in the games was often a loss of desirable options. Attempts to dampen the crisis in our game context tended to look like acts of weakness. In particular, because the games afforded too little opportunity to explore the meaning of diplomatic notes, such notes without accompanying military moves tended to be read as signals of weakness.[*] Sometimes in our games purely diplomatic moves were, indeed, a sign of weakness; at other times, no.[**]

There are several techniques that could be used to provide a better simulation of communications in a multipolar world. Conceptually, a larger number of separate teams could be used in a crisis exercise. However, the burdens on CONTROL would increase substantially. For example, in a simulation of a multipolar crisis, the sequencing of moves by many nations becomes critical. CONTROL would have to determine the sequencing. Its dilemma could be mitigated somewhat by having BLUE and its allies and RED and its allies play simultaneously, but separately. But then the required number of conferences and/or communications multiplies. The difficulties are compounded when teams are divided into political and military sections. Given limited time and resources, the multiteam technique seems unpromising.

As an alternative, CONTROL could represent secondary nations until it sees that, say, the actions of one of the latter will be key to the

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so far out of contact really. I don't think that we expected that he (Khrushchev) would put the missiles in Cuba, because it would have seemed such an imprudent action for him to take, as it was later proved. Now he obviously must have thought that he could do it in secret and that the United States would accept it. So that he did not judge our intentions correctly." Public Papers of the Presidents of the United States: John F. Kennedy, 1962, Washington, D. C., 1963, p. 898.

[*]There are examples of real-world crises where the United States refused to send a note because U.S. decisionmakers felt that the adversary would interpret the note as a sign of weakness.

[**]British and French response when Hitler marched into the Rhineland may be a case in point. See Alan Bullock, Hitler, A Study in Tyranny, Harper and Row, Publishers, New York, 1962, p. 345.

crisis path. CONTROL, at that point, could establish an additional principal with limited information and a choice as to interactions. Or CONTROL could employ country specialists at crucial branch points of play, giving these specialists the relevant data and following their judgment as to policies that the key secondary nations would likely apply.

As a means of simulating ambassadorial and informal contacts between RED and BLUE, RED and BLUE team members could confer directly, while being monitored by CONTROL. This would greatly enrich the game.

ESCALATION AND RULES OF BEHAVIOR

Both the locale and restrictions on communications contributed to escalatory moves in the crisis games. But often the teams adopted escalatory moves because of <u>ad hoc</u> doctrine and rules used in managing the crisis.*

Escalation, more than any other issue, divided BLUE teams. The internal BLUE debate centered on the desirability of "continuous" escalation as opposed to "quantum" escalation. Continuous escalation is defined as the adoption of minimal additional actions at any point in a crisis over what a nation is already doing. Four related arguments for using continuous escalation emerged during BLUE deliberations: (1) continuous escalation provides a way to signal and test intent at a relatively low level of violence; (2) if signals fail at any given level, it is possible to proceed to the smallest increment of violence, thereby preserving options and preventing miscalculations; (3) the adversary's interest changes least; and (4) the adversary has more opportunity to back down.

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*The three crisis exercises were treated as separate entities and not as a sequence to be handled by the same political and military teams. Although some of the players were active in all three exercises, they had no consistent basic national security policy that could be applied. And discussion of past crises played little role in the "next" crisis. Yet there is much discussion of the lesson of Cuba and there is an attempt, perhaps too much of one, to apply the lessons of Cuba to future crises.

One major argument against continuous escalation emerged during BLUE councils. Continuous escalation establishes a predictable pattern of behavior for BLUE that RED can anticipate and counter. In each crisis that we gamed, BLUE was at a local military disadvantage that facilitated RED's climbing the escalation ladder with BLUE. Therefore, it was argued, BLUE needed, at least in these hypothetical European crises, to escalate in quantum jumps so that the risks of further action were incalculable to RED.

BLUE's escalation debate posed basic questions that could not be explored in the games because of time limitations. First, what does being able to predict an adversary's escalatory behavior do to one's own will to use available capabilities? Is a nation more prone to escalate if its adversary's moves are predictable? Though the adversary's moves are predictable and matchable, could escalation be undesirable in terms of one's own interests and values? Second, in our three games the strategic balance was, by hypothesis, one of stable mutual deterrence -- RED and BLUE, after absorbing a first strike by the other would still retain an unacceptable damage-inflicting capability. If BLUE were faced by a "tit-for-tat" adversary in a stable-deterrence environment, quantum escalation meant that at higher levels of violence BLUE would have to convince RED that it was irrational -- that BLUE would employ means disproportionate to its interests. But establishing the credibility of BLUE irrationality in a stable deterrence world seemed difficult in the games. Madness may have its political uses, but the credibility of madness must be established.*
One way to establish such credibility is of course to make the quantum jumps of violence large and to change the issues and interests of the parties rapidly. But then the interests of the escalating nation may be ill-served.

The <u>ad hoc</u> rule that evolved from the BLUE intrateam discussions was that continuous escalation would be tried at lower levels of

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*The 1959 Lowell lectures by Daniel Ellsberg contained one titled "The Political Uses of Madness." This lecture deals with Hitler's use of madness or irrationality in the diplomacy of the 1930s.

violence. But if this rule did not achieve BLUE ends, there would be
quantum escalation at the higher levels.[*] Often the combination of
locale, lack of communications, and the divergent theories of escala-
tion resulted in too little pressure at low levels of violence and too
much pressure at higher levels. After several low level moves the
image of a tit-for-tat RED team appeared to BLUE in all three crises.
Consequently, the BLUE teams felt that increased pressure at low levels
would not be helpful. BLUE would then proceed, without additional
testing of RED intent, to large increases in the level of violence.
At the higher levels the problem of making irrationality credible was
not explicitly argued by BLUE players in the first two games. But it
was the subject of extensive discussion by BLUE POLITICAL in the South
Flank Exercise.

Doctrinal disputes were rare on the RED side. In part this
reflects the usual inability of a RED team to simulate the values and
interests of Soviet decisionmakers. And, in part, it reflects the
simplicity of RED's problem in the three exercises. The status quo
viewed by BLUE had been disturbed and RED had only to respond to BLUE
efforts to restore the status quo ante. The simplest rule that RED
could follow and thwart BLUE's effort was tit-for-tat, or sometimes
less than tit-for-tat. Politically, since BLUE was attempting to re-
store the status quo ante, the tit-for-tat-or-less doctrine permitted
RED to depict BLUE as an aggressor and a threat to world peace. RED
could argue publicly that it was simply doing the minimum required to
maintain its interests. But even more, tit-for-tat does not require
calculations about the adversary's behavior. RED could be unconcerned
whether BLUE's moves were calculable or incalculable, predictable or
unpredictable.

Tit-for-tat by RED had two further implications. Identifying a
RED tit-for-tat doctrine could deter BLUE from proceeding up the esca-
lation ladder, for its application was a signal that RED wanted its

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[*] The BLUE team during the Central Front Exercise was unable to
come to any consensus. Members stated their views in a post-game
seminar and critique.

interest in the crisis to appear as vital as that of BLUE. Thus a RED tit-for-tat doctrine, in a stable-deterrent world, could terminate a crisis in a way favorable to RED. On the other hand, given the restrictions of communication and the locale, RED found that tit-for-tat forced BLUE inevitably to large escalatory steps rather than to acceptance of defeat in Europe that would shift the balance of power. But characteristically, RED was willing to settle for minimal political gains in each crisis. So, tit-for-tat RED actions meant that the RED means rapidly became disproportionate to ends. Such a doctrine of action became tantamount to RED's electing rapid escalation; RED's wish to avoid the latter could have deterred its use of the doctrine.

Tit-for-tat behavior seems to be more common in our games than historically in the real world. For example, a Soviet tit-for-tat in the Cuban missile crisis might have included a Soviet squeeze on Berlin. But presumably this tactic would have been disproportionate to Soviet ends, which were changing as a result of U.S. threats and coercion. Tit-for-tat in the Cuban missile crisis would have altered the choice of United States options enormously and greatly increased the shared risk of nuclear war.

However, the possibility remains that the Soviets will become more confident, particularly in a crisis where the United States is at a local disadvantage. The Soviets could believe that they are superior in a local confrontation and equal in a strategic confrontation. Would this lead to Soviet behavior approximating that of the RED teams in our games? Such behavior would indicate a changed set of values on the part of Soviet leadership, that is, for minimal political gains (although this would not be known to the United States) they would have become willing to climb an escalation ladder in a geographic area vital to the United States and one where the risks of nuclear war in a crisis are high in spite of strategic parity.

The crisis games illustrate the problem in handling an undeterrable, strategically confident adversary pursuing a foreign policy that is contrary to U.S. interests. (If a detente is but a passing phase of Soviet foreign policy, this problem will be real in the late 1960s and 1970s.) One tactic for opposing such an adversary is to include

a degree of irrationality in one's own crisis behavior. This was tried in the crisis games. But it is difficult for a democratic nation to pursue a deliberately irrational foreign policy. So apparently irrational moves tend to be dismissed as bluff. This also happened in the games.

How to coerce a tit-for-tat adversary in a stable strategic deterrence environment is one of the continuing problems of crisis management and one that deserves further analysis. Better simulations, perhaps by using Sovietologists on the RED teams, would help. Or it may be possible to construct game analogues of Soviet bureaucracy, thus injecting greater realism into the RED side of a gaming exercise.

Even though the Soviet decisionmaking process was not adequately simulated in our games, the exercises did serve to clarify different doctrines of escalation and to draw some consequences when such doctrines were implemented.

THREATS, DIPLOMACY, AND MILITARY ACTION

During our three crisis exercises, BLUE and RED evolved similar patterns of making threats. Teams would make general threats, announcing to the adversary that if the crisis continued the risks in the local confrontation would be overshadowed by the risk of general war. Ordinarily, teams did not employ specific threats about local military action coupled with ultimata. As local military action took place, the adversary received a note stating the action taken and explaining the rationale behind the action. BLUE and RED designed the timing of notes to forestall counteraction and to achieve maximum surprise.[*] The teams often used the "hot line" as a direct and rapid means of communication.[**]

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[*] Moves whose main effect is surprise are hard to evaluate in a crisis exercise, although BLUE, at least, made several moves primarily to shock and surprise RED.

[**] The use of the "hot line" emphasized the direct nature of the confrontation. Its use, however, raises several questions, First, since direct communication may have an escalatory effect, do nations in a crisis want such a direct, rapid means of communication? Second,

In part, the strategy of threats employed in the games reflects the game structure. As noted above, the restricted channels of communication easily led each side to discount purely verbal, specific threats. Substantively, a purely verbal threat in the European locale could be interpreted as a sign that a nation considered its position a weak one. It can be and was argued during the exercises that delivering a specific threat plus an ultimatum, then carrying out the threat if the conditions of the ultimatum are not met is good threat strategy. Implementing the threat demonstrates a nation is really serious.

Several arguments against such a threat strategy emerged in the crisis exercises. First, a specific threat coupled with an ultimatum commits the prestige of the threatening party to carry out the threat, if the conditions of the ultimatum are not met. But clearly the prestige of the threatened party becomes committed to not meeting the conditions. Thus the options on both sides are reduced. Second, specific verbal threats can be met by counter threats, especially those of a tit-for-tat nature. Third, specific verbal threats reduce the adversary's uncertainty. But in some cases it is the uncertainty of response that acts as a deterrent. Fourth, national decisionmakers probably find it easier to make unspecified threats. And, fifth, specific threats may signal an undesirable degree of national commitment.* The RED and BLUE teams seemed to be aware of these factors in their threat strategies.

The teams' action strategies contrasted markedly with their threat strategies. Both teams required that military action be precise and discriminating. Military actions were always accompanied by a

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should the "hot line" be reserved for honest, private questions and answers? Debasing it in a crisis may set a bad precedent for future crises, especially one where both sides may be on the brink of using strategic nuclear weapons.

*Part of the crisis management problem is defining the national interest. Specific threats might commit a nation when it has not yet decided to be committed. The threat strategy in such a case is to make general threats or to generate public discussion of many alternative military actions but leave the preferred alternative unknown. Such a threat strategy does not, of course, preclude secondary verbal threats whose purpose is reinforcing the credibility of general threats.

diplomatic note to the parties concerned; they were not permitted to
speak for themselves. Again this was due in part to game structure,
for a military move without a note could be construed in many ways
because of the restricted channels of communication. But there is
a rationale, independent of game structure, for communicating with
an adversary while initiating violence. First, the combination of
diplomacy and force conveys to the adversary that a nation does not
consider itself in a position of weakness. It implies that a nation
is willing to rectify any local imbalances in order to maintain its
interests, but is willing to negotiate. Second, having indicated both
resolve and willingness to negotiate, this nation thrusts the burden
of decision on the adversary. Having received a signal of the other's
evaluation of its power position, the adversary must then find some
combination of diplomacy and force that will in turn convey its evalu-
ation of the power struggle. Tit-for-tat (discussed above in another
connection) was the doctrine selected by RED in response to a BLUE
move.

The question arose whether RED tit-for-tat doctrine was a product
of BLUE's failure to provide RED a graceful exit from the crises.
Conversely, in all three games RED failed to recognize that the only
acceptable crisis exit that BLUE had was restoration of the status quo
ante in Europe. The flexibility of both sides for making exits avail-
able to the other was depleted by the locale and the interests of the
principals. Face-saving devices in a European confrontation seem
difficult to identify.

A decision to offer a face-saving device or a graceful exit is
made prior to finding such a device. Is it desirable to permit an
aggressor an escape? As to offering face-saving devices, should a
nation distinguish between an overt aggressor and an adversary who
blunders into a crisis or attempts to exploit crises involving sec-
ondary nations? And this question is compounded by the distinction
between offering an adversary a choice and offering a face-saving
device. In the Cuban missile crisis, the United States offered the
Soviet Union a choice between removing its missiles or engaging in a

direct confrontation with the United States.* The United States did
not appear to offer a face-saving device so that the Soviet Union
could back down. The Soviet Union _did_ lose face. And in a crisis
where extremely vital interests of the United States are involved,
decisionmakers have the question of whether or not _public_ face-saving
devices ought to be offered.

In our three games, a public face-saving device for RED, assuming
one could be found, could have had disastrous consequences for BLUE's
political position. The North Flank Exercise and the Central Front
Exercise found RED making forceful territorial changes in Europe or
attempting to change the legal status of Berlin without BLUE consent.
A face-saving opportunity for RED in these two crises probably meant
that RED would retain its gains.

By contrast, the South Flank Exercise furnished an example of a
crisis where RED was not initially a direct aggressor but attempted
to exploit an ongoing crisis between two secondary nations. In the
initial stages of this crisis, BLUE sought to convince RED that it
had miscalculated the extent of the BLUE commitment. BLUE offered to
use its influence with one of the secondary nations to achieve a RED
aim, if RED would bring its influence to restrain secondary nations
whom it had been aiding. Here was an example of an offer of _quid pro_
quo. A face-saving device for RED did not appear to be necessary at
this point since RED was not directly involved. Any face-saving
opportunity offered to RED -- one where RED _apparently_ seemed to gain
something -- would have been a confession of BLUE weakness. Political
and military appearances contribute to political and military reali-
ties. BLUE's power position would permit _quid pro quo_ offers, but not

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*"The limited initial action chosen by the Administration gave
the Soviet authorities an _opportunity to realize that they had mis-_
calculated and to reverse their course. But, if our limited initial
action had not been effectively persuasive, we would have taken fur-
ther steps. We were determined to eliminate Soviet offensive weapons
from this hemisphere and prepared to do whatever was necessary to
achieve that end." Rostow, _op. cit._ (Emphasis added.)

a public offer that would save RED face.[*] An escalation took place,
RED did not invite a face-saving device as a means of disengaging from
the crisis, but appeared willing to mount the escalation ladder with
BLUE. Consequently, BLUE POLITICAL concluded that any face-saving
gesture to RED would be ineffective, and might exacerbate the crisis
by furnishing evidence of BLUE weakness.

Of course, the different perceptions between the teams conditioned
their diplomacy. A dampening of each simulated crisis required an
understanding of how the other side defined the issues. Procedurally,
it is impossible to offer face-saving devices unless a nation knows
what its adversary considers important to its own prestige. The game
structure starved each team from the relevant information and this,
too, contributed to escalation.

In the real world, there are many channels for conveying a nation's
evaluation of its own prestige requirements and many ways to explore
the adversary's prestige requirements. However, deliberate public
face-saving devices seem to be relatively rare in real crises. Where
issues become explicit such as at Suez, Quemoy, and in Cuba, it is
difficult to tender graceful exits. An objective in a crisis may be
inducing a loss of prestige by the adversary. If the Soviet Union had
succeeded in emplacing missiles in Cuba, the United States would have
lost prestige, for the entire political balance of power would have
been altered, even though the President publicly claimed that the
strategic balance would not have changed very much.[**]

Crises may occur in areas where the prestige of RED or BLUE is
not directly at stake. Managing such a crisis involves definitions of
interests and decisions on committing RED or BLUE prestige. Both sides
may be able to offer graceful exits, because neither wants to be com-
mitted. But in the real world, as in the game world, the prestige of
RED and BLUE is irrevocably committed in Europe. A nation so committed

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[*] RED, of course, could have insisted that it required a face-
saving device to disengage from the crisis.

[**] Public Papers of the Presidents of the United States, op. cit.,
p. 898.

could judge the loss of prestige in offering a face-saving exit to its adversary to be unacceptable. And this is likely to happen during a crisis in Europe. So the absence of face-saving offers in a game is not necessarily a consequence of defective game structure. (We note that the Soviet Union has often made loss of face a secondary concern when the Soviet state or party have been potentially threatened through a direct confrontation with the United States. Some students of Soviet affairs attribute such behavior to an innate Bolshevik psychology or mentality.[*])

THE ROLE OF MILITARY CAPABILITIES AND FORCE PLANNING

In the preceding sections we presented a number of research issues relating to the conduct of crisis action by political decisionmakers. This final section illustrates the relevance of crisis gaming to military planning.

One adversary or the other has some degree of initial military advantage in the locale of the crisis. At the other extreme, the (world-wide) strategic balance is relevant as well. But the options for crisis actions available to the adversaries, as well as their preferences among these options, seemed to be affected by the military capabilities that each could bring to bear in the crisis locale and its environs. The proximity of these "imported" military capabilities could well govern the direction of crisis action: whether or not a threat had the impact merely of a bluff, whether or not one side judged itself to be at a disadvantage on the lower or the middle rungs of an escalation ladder, whether or not status quo ante could be quickly re-stored at low levels of force, and so on.

Our games consistently suggested that being able to expand local military capabilities rapidly is extremely important to political decisionmakers. The plays revealed many specific requirements for sudden orders-of-magnitude expansion of logistical flow to a crisis

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[*]See N. Leites, The Operational Code of the Politburo, McGraw-Hill Book Company, Inc., New York, 1951.

theater, for quick redeployment of European and ZI-based ground and air units and their command and control systems, for effective ad hoc arrangements providing air defense and reconnaissance, and so on. Not the least of the needs felt in the games was that of having contingency plans in existence for the expedient shift of military resources to possible crisis theaters, and to exploit the pre-stocking of heavy military equipment at strategic locations.

Crisis gaming provides a dynamic way of looking at military requirements. Sometimes important requirements appear only in a dynamic politico-military context. They are not revealed by "static" calculations of stipulated targets and the allocation of weapons to those targets. In some crises a desperately needed military capability does not exist, and political decisionmakers insist that the military improvise a capability. Crisis gaming provides a way for the military decisionmaker to anticipate needs of political decisionmakers. Comparison of options open to a decisionmaker in a crisis with alternative military forces is a means of revealing the relative usefulness of alternative forces. According to the public statements of high-level political and military planners, such comparisons will become increasingly important for defense procurement and research and development.

Because this is so, crisis gaming and comparative analysis of the results of crisis gaming could become an important tool in force planning. The potentials of crisis gaming in force planning have only begun to be explored. But use of such a tool properly requires that its properties and purposes be well understood. We expect that as more experience is gained with the tool, new uses will be found.